

0590
0731

13



OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/964,275B

DATE: 08/07/2002

TIME: 09:50:02

Input Set : A:\0136542 SEQLST.ST25.txt

Output Set: N:\CRF3\08072002\I964275B.raw

```

3 <110> APPLICANT: Dai, Ken-Shwo
4   Yang, Chin-Chang
6 <120> TITLE OF INVENTION: HUMAN NUC2-RELATED GENE VARIANTS ASSOCIATED WITH LUNG CANCER
8 <130> FILE REFERENCE: U 013654-2
10 <140> CURRENT APPLICATION NUMBER: 09/964,275B
11 <141> CURRENT FILING DATE: 2001-09-26
13 <160> NUMBER OF SEQ ID NOS: 10
15 <170> SOFTWARE: PatentIn version 3.1
17 <210> SEQ ID NO: 1
18 <211> LENGTH: 2385
19 <212> TYPE: DNA
20 <213> ORGANISM: HOMO SAPIEN
22 <220> FEATURE:
23 <221> NAME/KEY: CDS
24 <222> LOCATION: (145)..(1032)
25 <223> OTHER INFORMATION:
27 <400> SEQUENCE: 1
28 gggtcctcat ctggaacacc tcgggtcacc cccgacaacg gtggtgggag ggagagcggc      60
30 ctctcctcc ctggtggggc ctgtctgggt gaagcccctc tgttcccag gatcgtcca      120
32 acccccagcc ggggtgctcg agcc atg gcc gac acc atc ttc ggc agc ggg      171
33                               Met Ala Asp Thr Ile Phe Gly Ser Gly
34                               1             5
36 aat gat cag tgg gtt tgc ccc aat gac cgg cag ctt gcc ctt cga gcc      219
37 Asn Asp Gln Trp Val Cys Pro Asn Asp Arg Gln Leu Ala Leu Arg Ala
38 10                               15             20             25
40 aag ctg cag acg ggc tgg tcc gtg cac acc tac cag acg gag aag cag      267
41 Lys Leu Gln Thr Gly Trp Ser Val His Thr Tyr Gln Thr Glu Lys Gln
42                               30             35             40
44 agg agg aag cag cac ctc agc ccg gcg gag gtg gag gcc atc ctg cag      315
45 Arg Arg Lys Gln His Leu Ser Pro Ala Glu Val Glu Ala Ile Leu Gln
46                               45             50             55
48 gtc atc cag agg gca gag cgg ctc gac gtc ctg gag cag cag aga atc      363
49 Val Ile Gln Arg Ala Glu Arg Leu Asp Val Leu Glu Gln Gln Arg Ile
50                               60             65             70
52 ggg cgg ctg gtg gag cgg ctg gag acc atg agg cgg aat gtg atg ggg      411
53 Gly Arg Leu Val Glu Arg Leu Glu Thr Met Arg Arg Asn Val Met Gly
54                               75             80             85
56 aac ggc ctg tcc cag tgt ctg ctc tgc ggg gag gtg ctg ggc ttc ctg      459
57 Asn Gly Leu Ser Gln Cys Leu Leu Cys Gly Glu Val Leu Gly Phe Leu
58 90                               95             100             105
60 ggc agc tcg tcg gtg ttc tgc aaa gac tgc agg aag gtc tgg aag agg      507
61 Gly Ser Ser Ser Val Phe Cys Lys Asp Cys Arg Lys Val Trp Lys Arg
62                               110             115             120

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/964,275B

DATE: 08/07/2002

TIME: 09:50:02

Input Set : A:\0136542 SEQLST.ST25.txt

Output Set: N:\CRF3\08072002\I964275B.raw

64	tcg	ggg	gcc	tgg	ttc	tac	aaa	ggg	ctc	ccc	aag	tat	atc	ttg	ccc	ctg	555
65	Ser	Gly	Ala	Trp	Phe	Tyr	Lys	Gly	Leu	Pro	Lys	Tyr	Ile	Leu	Pro	Leu	
66																	135
																	125
68	aag	acc	cct	ggc	cga	gct	gat	gag	ccc	cag	ttc	cga	cct	tgg	ccc	acg	603
69	Lys	Thr	Pro	Gly	Arg	Ala	Asp	Glu	Pro	Gln	Phe	Arg	Pro	Trp	Pro	Thr	
70																	140
72	gaa	ccg	gca	gag	cga	gag	ccc	aga	agc	tct	gag	acc	agc	cgc	atc	tac	651
73	Glu	Pro	Ala	Glu	Arg	Glu	Pro	Arg	Ser	Ser	Glu	Thr	Ser	Arg	Ile	Tyr	
74																	155
76	acg	tgg	gcc	cga	gga	aga	gtg	gtt	tcc	agt	gac	agt	gac	agt	gac	tcg	699
77	Thr	Trp	Ala	Arg	Gly	Arg	Val	Val	Ser	Ser	Asp	Ser	Asp	Ser	Asp	Ser	
78	170																175
80	gat	ctt	agc	tcc	tcc	agc	cta	gag	gac	aga	ctc	cca	tcc	act	ggg	gtc	747
81	Asp	Leu	Ser	Ser	Ser	Ser	Leu	Glu	Asp	Arg	Leu	Pro	Ser	Thr	Gly	Val	
82																	190
84	agg	gac	cgg	aaa	ggc	gac	aaa	ccc	tgg	aag	gag	tca	ggt	ggc	agc	gtg	795
85	Arg	Asp	Arg	Lys	Gly	Asp	Lys	Pro	Trp	Lys	Glu	Ser	Gly	Gly	Ser	Val	
86																	205
88	gag	gcc	ccc	agg	atg	ggg	ttc	acc	caa	ccc	gcg	ggc	cac	ctc	ttt	ggg	843
89	Glu	Ala	Pro	Arg	Met	Gly	Phe	Thr	Gln	Pro	Ala	Gly	His	Leu	Phe	Gly	
90																	220
92	ttg	cag	agc	agc	ctg	gcc	agt	ggt	gag	acg	ggc	aca	ggc	tct	gct	gac	891
93	Leu	Gln	Ser	Ser	Leu	Ala	Ser	Gly	Glu	Thr	Gly	Thr	Gly	Ser	Ala	Asp	
94																	235
96	ccg	cca	ggg	gga	ggg	aca	ggc	tct	gct	gac	ccg	cca	ggg	gga	ccc	cgc	939
97	Pro	Pro	Gly	Gly	Gly	Thr	Gly	Ser	Ala	Asp	Pro	Pro	Gly	Gly	Pro	Arg	
98	250																255
100	ccc	ggg	ctg	acc	cga	agg	gcc	ccg	gta	aaa	gac	aca	cct	gga	cga	gcc	987
101	Pro	Gly	Leu	Thr	Arg	Ala	Pro	Val	Lys	Asp	Thr	Pro	Gly	Arg	Ala		
102																	270
104	ccc	gct	gct	gac	gca	gct	cca	gca	ggc	ccc	tcc	agc	tgc	ctg	ggc		1032
105	Pro	Ala	Ala	Asp	Ala	Ala	Pro	Ala	Gly	Pro	Ser	Ser	Cys	Leu	Gly		
106																	285
108	tgaggtgtct	ggtgcctgga	acagacttcc	ctgtggagga	ttcctgccag	accctgcccg											1092
110	gtcctcctcct	gaccggtcct	tgtgcctcca	ccagacaccc	tggtggccat	gactcaaccc											1152
112	accagtgttg	ggagccgtct	gcctccccag	ctcagtgcct	ttctgcaccc	cttctctcct											1212
114	ggggagctgt	ctgcatccgc	cacccccctcc	aaccactgcc	ctcagccccc	gaccttattt											1272
116	attaccctcc	cctcccacac	ccccaatcta	cctggtgatg	attttaagtt	tgccgctgtc											1332
118	ttgggtttggg	ctgggggggtt	tcccacatgc	agtgtcagag	gggcccggcg	gtggggctat											1392
120	ctccgttgct	atattaatgg	caagactaaa	tgaaacctag	ggcacggcct	ccgaagctgc											1452
122	gtgtggcccc	ttagaggtga	gcacagagag	cagagcagtg	agggggagac	tcacccaccc											1512
124	tctccctctc	ccttcagctc	tgggaggcag	gcgcagtgcc	cccctcccat	gggctggccc											1572
126	aggaccgcgg	gtgaaacctg	ggtctgttta	gtttcttttg	tttttgatg	tttggtttgtt											1632
128	tttgacacag	tctcgctttg	ttgcccaggc	tggggtgcag	tggcacgacg	gcggctcact											1692
130	gcaacctcca	cctcccgggc	tcaagcgatt	ctctcacctc	agcctcctga	gtaggtggga											1752
132	ttacagatgc	ccgccaccac	accagttaa	tttttgattt	tttagaagag	atgggggtttc											1812
134	tccatgttgg	ccaggctggg	cttgaactcc	tgggtctcaag	tgatccgccc	gcctcggcct											1872
136	cccaaagtgc	tgggattaca	ggtgtgagcc	accgcaccca	atcctattag	gtttctttga											1932
138	atccctcat	ggcctgcctg	gtttttgtct	agcctgtctt	cagcttgagg	agctgggaag											1992

RAW SEQUENCE LISTING

DATE: 08/07/2002

PATENT APPLICATION: US/09/964,275B

TIME: 09:50:02

Input Set : A:\0136542 SEQLST.ST25.txt

Output Set: N:\CRF3\08072002\I964275B.raw

```

140 ctctggtgga tgctatgaac tcacttgctg aagagcagcg ttcaggtgca tccccagcca 2052
142 gggcacgtgg ctccctcagc catgaattca cttctcttca ggaggtttgg cttggcatga 2112
144 aaatacttca ttcagagtat gggcaaagtc ttctggaaaa cccttccctg aagagagaga 2172
146 acgtgtgtgt gtgtgtcggg gatcacaccc tccatcctt cctgcctcct gcccacaaacc 2232
148 cggggttcct ggggtctgga gggccttctc tccaagctgg gagctcctgg gccccaccca 2292
150 ttcacttttt gtccttgctg ctggcaaaaca gtaaagaaac tcactttccc tgtggcacgt 2352
152 tatgcttcag aattaaaaca atgaagatta aaa 2385
155 <210> SEQ ID NO: 2
156 <211> LENGTH: 296
157 <212> TYPE: PRT
158 <213> ORGANISM: HOMO SAPIEN
160 <400> SEQUENCE: 2
162 Met Ala Asp Thr Ile Phe Gly Ser Gly Asn Asp Gln Trp Val Cys Pro
163 1 5 10 15
166 Asn Asp Arg Gln Leu Ala Leu Arg Ala Lys Leu Gln Thr Gly Trp Ser
167 20 25 30
170 Val His Thr Tyr Gln Thr Glu Lys Gln Arg Arg Lys Gln His Leu Ser
171 35 40 45
174 Pro Ala Glu Val Glu Ala Ile Leu Gln Val Ile Gln Arg Ala Glu Arg
175 50 55 60
178 Leu Asp Val Leu Glu Gln Gln Arg Ile Gly Arg Leu Val Glu Arg Leu
179 65 70 75 80
182 Glu Thr Met Arg Arg Asn Val Met Gly Asn Gly Leu Ser Gln Cys Leu
183 85 90 95
186 Leu Cys Gly Glu Val Leu Gly Phe Leu Gly Ser Ser Ser Val Phe Cys
187 100 105 110
190 Lys Asp Cys Arg Lys Val Trp Lys Arg Ser Gly Ala Trp Phe Tyr Lys
191 115 120 125
194 Gly Leu Pro Lys Tyr Ile Leu Pro Leu Lys Thr Pro Gly Arg Ala Asp
195 130 135 140
198 Glu Pro Gln Phe Arg Pro Trp Pro Thr Glu Pro Ala Glu Arg Glu Pro
199 145 150 155 160
202 Arg Ser Ser Glu Thr Ser Arg Ile Tyr Thr Trp Ala Arg Gly Arg Val
203 165 170 175
206 Val Ser Ser Asp Ser Asp Ser Asp Ser Asp Leu Ser Ser Ser Ser Leu
207 180 185 190
210 Glu Asp Arg Leu Pro Ser Thr Gly Val Arg Asp Arg Lys Gly Asp Lys
211 195 200 205
214 Pro Trp Lys Glu Ser Gly Gly Ser Val Glu Ala Pro Arg Met Gly Phe
215 210 215 220
218 Thr Gln Pro Ala Gly His Leu Phe Gly Leu Gln Ser Ser Leu Ala Ser
219 225 230 235 240
222 Gly Glu Thr Gly Thr Gly Ser Ala Asp Pro Pro Gly Gly Gly Thr Gly
223 245 250 255
226 Ser Ala Asp Pro Pro Gly Gly Pro Arg Pro Gly Leu Thr Arg Arg Ala
227 260 265 270
230 Pro Val Lys Asp Thr Pro Gly Arg Ala Pro Ala Ala Asp Ala Ala Pro
231 275 280 285
234 Ala Gly Pro Ser Ser Cys Leu Gly

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/964,275B

DATE: 08/07/2002

TIME: 09:50:02

Input Set : A:\0136542_SEQLIST.ST25.txt

Output Set: N:\CRF3\08072002\I964275B.raw

```

235      290      295
238 <210> SEQ ID NO: 3
239 <211> LENGTH: 2472
240 <212> TYPE: DNA
241 <213> ORGANISM: HOMO SAPIEN
243 <220> FEATURE:
244 <221> NAME/KEY: CDS
245 <222> LOCATION: (145)..(1119)
246 <223> OTHER INFORMATION:
248 <400> SEQUENCE: 3
249 ggctcctcat ctggaacacc tcgggtcacc cccgacaacg gtgggtgggag ggagagcggc      60
251 ctctctctcc ctggtggggc ctgtctgggt gaagcccctc tgttcccgag gatcgtcca      120
253 acccccagcc ggggtgctccg agcc atg gcc gac acc atc ttc ggc agc ggg      171
254                               Met Ala Asp Thr Ile Phe Gly Ser Gly
255                               1                               5
257 aat gat cag tgg gtt tgc ccc aat gac cgg cag ctt gcc ctt cga gcc      219
258 Asn Asp Gln Trp Val Cys Pro Asn Asp Arg Gln Leu Ala Leu Arg Ala
259 10                               15                               20                               25
261 aag ctg cag acg ggc tgg tcc gtg cac acc tac cag acg gag aag cag      267
262 Lys Leu Gln Thr Gly Trp Ser Val His Thr Tyr Gln Thr Glu Lys Gln
263                               30                               35                               40
265 agg agg aag cag cac ctc agc ccg gcg gag gtg gag gcc atc ctg cag      315
266 Arg Arg Lys Gln His Leu Ser Pro Ala Glu Val Glu Ala Ile Leu Gln
267                               45                               50                               55
269 gtc atc cag agg gca gag cgg ctc gac gtc ctg gag cag cag aga atc      363
270 Val Ile Gln Arg Ala Glu Arg Leu Asp Val Leu Glu Gln Gln Arg Ile
271                               60                               65                               70
273 ggg cgg ctg gtg gag cgg ctg gag acc atg agg cgg aat gtg atg ggg      411
274 Gly Arg Leu Val Glu Arg Leu Glu Thr Met Arg Arg Asn Val Met Gly
275                               75                               80                               85
277 aac ggc ctg tcc cag tgt ctg ctc tgc ggg gag gtg ctg ggc ttc ctg      459
278 Asn Gly Leu Ser Gln Cys Leu Leu Cys Gly Glu Val Leu Gly Phe Leu
279 90                               95                               100                               105
281 ggc agc tcg tcg gtg ttc tgc aaa gac tgc agg aag aaa gtc tgc acc      507
282 Gly Ser Ser Ser Val Phe Cys Lys Asp Cys Arg Lys Lys Val Cys Thr
283                               110                               115                               120
285 aaa tgt ggg atc gag gcc tcc cct ggc cag aag cgg ccc ctg tgg ctg      555
286 Lys Cys Gly Ile Glu Ala Ser Pro Gly Gln Lys Arg Pro Leu Trp Leu
287                               125                               130                               135
289 tgt aag atc tgc agt gag caa aga gag gtc tgg aag agg tcg ggg gcc      603
290 Cys Lys Ile Cys Ser Glu Gln Arg Glu Val Trp Lys Arg Ser Gly Ala
291                               140                               145                               150
293 tgg ttc tac aaa ggg ctc ccc aag tat atc ttg ccc ctg aag acc cct      651
294 Trp Phe Tyr Lys Gly Leu Pro Lys Tyr Ile Leu Pro Leu Lys Thr Pro
295                               155                               160                               165
297 ggc cga gct gat gac ccc cac ttc cga cct ttg ccc acg gaa ccg gca      699
298 Gly Arg Ala Asp Asp Pro His Phe Arg Pro Leu Pro Thr Glu Pro Ala
299 170                               175                               180                               185
301 gag cga gag ccc aga agc tct gag acc agc cgc atc tac acg tgg gcc      747

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/964,275B

DATE: 08/07/2002

TIME: 09:50:02

Input Set : A:\0136542 SEQLST.ST25.txt

Output Set: N:\CRF3\08072002\I964275B.raw

```

302 Glu Arg Glu Pro Arg Ser Ser Glu Thr Ser Arg Ile Tyr Thr Trp Ala
303          190          195          200
305 cga gga aga gtg gtt tcc agt gac agt gac agt gac tcg gat ctt agc      795
306 Arg Gly Arg Val Val Ser Ser Asp Ser Asp Ser Asp Ser Asp Leu Ser
307          205          210          215
309 tcc tcc agc cta gag gac aga ctc cca tcc act ggg gtc agg gac cgg      843
310 Ser Ser Ser Leu Glu Asp Arg Leu Pro Ser Thr Gly Val Arg Asp Arg
311          220          225          230
313 aaa ggc gac aaa ccc tgg aag gag tca ggt ggc agc gtg gag gcc ccc      891
314 Lys Gly Asp Lys Pro Trp Lys Glu Ser Gly Gly Ser Val Glu Ala Pro
315          235          240          245
317 agg atg ggg ttc acc caa ccc gcg ggc cac ctc ttt ggg ttg cag agc      939
318 Arg Met Gly Phe Thr Gln Pro Ala Gly His Leu Phe Gly Leu Gln Ser
319 250          255          260          265
321 agc ctg gcc agt ggt gag acg ggc aca ggc tct gct gac ccg cca ggg      987
322 Ser Leu Ala Ser Gly Glu Thr Gly Thr Gly Ser Ala Asp Pro Pro Gly
323          270          275          280
325 gga ggg aca ggc tct gct gac ccg cca ggg gga ccc cgc ccc ggg ctg      1035
326 Gly Gly Thr Gly Ser Ala Asp Pro Pro Gly Gly Pro Arg Pro Gly Leu
327          285          290          295
329 acc cga agg gcc ccg gta aaa gac aca cct gga cga gcc ccc gct gct      1083
330 Thr Arg Arg Ala Pro Val Lys Asp Thr Pro Gly Arg Ala Pro Ala Ala
331          300          305          310
333 gac gca gct cca gca ggc ccc tcc agc tgc ctg ggc tgaggtgtct      1129
334 Asp Ala Ala Pro Ala Gly Pro Ser Ser Cys Leu Gly
335          315          320          325
337 ggtgacctga acagacttcc ctgtggagga ttctgtccag accctgcccg gctcctccct      1189
339 gaccggtcct tgtgcoctca ccagacaccc tggtggccat gactcaacaa accagtgttg      1249
341 ggagccgtct gcctccccag ctcaagtgcct ttctgcaccc cttctctcct ggggagctgt      1309
343 ctgcatccgc cccccctcc aacctgtgc ctcagccccc gaccttattt attaccctcc      1369
345 cctcccacac ccccaatcta cctggtgatg attttaagtt tgccgtgtgc ttgggttggg      1429
347 ctgggggggt tcccacatgc agtgcagag gggccgcccg gtggggctat ctccgttgct      1489
349 atattaatgg caagactaaa tgaaacctag ggcacggcct ccgaagctgc gtgtggcccc      1549
351 ttagaggtga gcatcagagc cagagcagtg agggggagac tcacccaccc tctccctctc      1609
353 ccttcagctc tgggaggcag gcgcagtgcc cccctcccat gggctggccc aggaccgcg      1669
355 gtgaaacctg ggtctgttta gttcttttg tttttgtatg tttgtttgtt tttgacacag      1729
357 tctcgttttg ttgcccaggc tggggtgcag ttggcagatc gcggctcact gcaacctcca      1789
359 cctcccgggc tcaagcgatt ctctcacctc agcctcctga gtagggtgga ttacagatgc      1849
361 ccgccaccac acccagttaa tttttgtatt tttagaagag atggggtttc tccatgttg      1909
363 ccaggctggt cttgaactcc tgggtctcaag tgatccgccc gcctcggcct cccaaagtgc      1969
365 tgggattaca ggtgtgagcc accgcaccca atcctattag gtttctttga atccccctat      2029
367 ggctgtcctg gtttttgcct agcctgtctt cagcttgagg agctgggaag ctctggtgga      2089
369 tgctatgaac tcacttgctg aagagcagcg ttcagggtgca tccccagcca gggcacgtgg      2149
371 ctccctcagc catgaattca cttctcttca ggaggttttg cttggcatga aaatacttca      2209
373 ttcagagtat gggcaaatgc ttctggaaaa cccttccctg aagagagaga acgtgtgtgt      2269
375 gtgtgtcggg gatcacaccc tcccatcctt cctgcctcct gcccacaaacc ccgggttcc      2329
377 ggggtctggaa gggccttctc tccaagctgg gagctcctgg gcccacacca ttcactttt      2389
379 gtccttgctg ctggcaaaaca gtaaagaaac tcactttccc tgtggcacgt tatgottcag      2449
381 aattaaaaca atgaagatta aaa      2472

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/964,275B

DATE: 08/07/2002

TIME: 09:50:03

Input Set : A:\0136542 SEQLST.ST25.txt

Output Set: N:\CRF3\08072002\I964275B.raw